

AMENDMENT UNDER 37 C.F.R. §1.114(c)  
Application Number 09/2887,264

Our Ref: Q53917  
Art Unit: 2682

### **AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

#### **LISTING OF CLAIMS:**

1. (CANCELLED)
2. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said de-activation includes performing said algorithm with a relatively higher repetition period.
3. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said de-activation includes performing a different algorithm instead.
4. (ORIGINAL) A method according to claim 3, wherein said algorithm and said other algorithm are chosen in a group comprising closed-loop power control algorithms and open-loop power control algorithms.
5. (PREVIOUSLY PRESENTED) A method according to claim 21, comprising:
  - regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated, when activated, or activated, when de-activated,
  - de-activating, or activating, said power control algorithm if the corresponding criterion is met.
6. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein provision is made not to de-activate, or activate, said algorithm too frequently.

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7. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality.

8. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimation as to whether said criterion is met includes:

- an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,

- an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

- a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

9. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimated transmission quality is represented by an estimated signal-to-interference ratio.

10. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimated transmission quality is represented by a received signal power.

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11. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

12. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said method is performed in the uplink transmission direction of said mobile radiocommunication system.

13. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said method is performed in the downlink transmission direction of said mobile radiocommunication system.

14. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said mobile radiocommunication system is of CDMA type.

15. (PREVIOUSLY PRESENTED) A mobile radiocommunication network entity, comprising, for performing a method according to claim 21, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

16. (CURRENTLY AMENDED) A mobile station, comprising, for performing a method according claim 21, in the uplink transmission direction of a mobile radiocommunication system:

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- means for receiving power control commands from a mobile  
radiocommunication network entity, provided according to said method.

17. (PREVIOUSLY PRESENTED) A mobile station, comprising, for performing a  
method according to claim 21, in the downlink transmission direction of a mobile  
radiocommunication system:

- means for performing said method,  
- means for sending corresponding power control commands to a mobile  
radiocommunication network entity.

18. (CURRENTLY AMENDED) A mobile radiocommunication network entity, comprising,  
for performing a method according to claim 21, in the downlink transmission direction of  
a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided  
according to said method.

19. (CANCELLED)

20. (CANCELLED)

21. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile  
radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control  
algorithm should better be de-activated; and

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de-activating said power control algorithm if said criterion is met,  
wherein said estimating step includes:  
an estimation of performance of said system with said power control  
algorithm activated;  
an estimation of performance of said system with said power control  
algorithm de-activated; and  
making a choice between activating and de-activating said algorithm  
based on said estimating step.

22. (CANCELLED)

23 (CANCELLED)

24. (CANCELLED)

25. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile  
radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control  
algorithm should better be de-activated; and

de-activating said power control algorithm if said criterion is met,  
wherein said estimating step includes:

an estimation of performance of said system with said power control algorithm  
de-activated; and

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making a choice between activating and de-activating said algorithm based on said estimating step.

26. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated,

de-activating said power control algorithm if said criterion is met,

wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and

wherein said estimation as to whether said criterion is met includes:

an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,

an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

27. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

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regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated,  
de-activating said power control algorithm if said criterion is met,  
wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and  
wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

28. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and  
de-activating said power control algorithm if said criterion is met,  
wherein said de-activation includes performing a different type of algorithm than said power control algorithm, and  
wherein said different type of algorithm includes an algorithm showing better performances than said algorithm in fast changing environments and/or high mobile speed.

29. (PREVIOUSLY PRESENTED) A method according to claim 28, comprising:

- regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated, when activated, or activated, when de-activated,

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- de-activating, or activating, said power control algorithm if the corresponding criterion is met.

30. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein provision is made not to de-activate, or activate, said algorithm too frequently.

31. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality.

32. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and

de-activating said power control algorithm if said criterion is met, wherein said de-activation includes performing a different type of algorithm than said power control algorithm,

wherein said algorithm and said other algorithm are chosen in a group comprising closed-loop power control algorithms and open-loop power control algorithms, and

wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and

wherein said estimation as to whether said criterion is met includes:



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- an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,

- an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

- a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

33. (PREVIOUSLY PRESENTED) A method according to claim 31, wherein said estimated transmission quality is represented by an estimated signal-to-interference ratio.

34. (PREVIOUSLY PRESENTED) A method according to claim 31, wherein said estimated transmission quality is represented by a received signal power.

35. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and

de-activating said power control algorithm if said criterion is met,  
wherein said de-activation includes performing a different type of algorithm than said power control algorithm,

wherein said algorithm and said other algorithm are chosen in a group comprising closed-loop power control algorithms and open-loop power control algorithms, and

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wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and

wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

36. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said method is performed in the uplink transmission direction of said mobile radiocommunication system.

37. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said method is performed in the downlink transmission direction of said mobile radiocommunication system.

38. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said mobile radiocommunication system is of CDMA type.

39. (PREVIOUSLY PRESENTED) A mobile radiocommunication network entity, comprising, for performing a method according to claim 28, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

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40. (CURRENTLY AMENDED) A mobile station, comprising, for performing a method according to claim 28, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

41. (PREVIOUSLY PRESENTED) A mobile station, comprising, for performing a method according to claim 28, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,  
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

42. (CURRENTLY AMENDED) A mobile radiocommunication network entity, comprising, for performing a method according to claim 28, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

43. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said power control algorithm is one of a closed loop and open loop algorithm, and said different type of algorithm is the other of said closed loop or open loop algorithm.

44. (CANCELLED)

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45. (CANCELLED)

46. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating whether a criterion is met as to whether said power control algorithm should better not be performed, and

not performing any power control algorithm in accordance with a result of said estimating step,

wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality.

47. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimation as to whether said criterion is met includes:

- an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,

- an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

- a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

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48. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimated transmission quality is represented by an estimated signal-to-interference ratio.

49. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimated transmission quality is represented by a received signal power.

50. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

51. (CANCELLED)

52. (CANCELLED)

53. (CANCELLED)

54. (CANCELLED)

55. (CANCELLED)

56. (CANCELLED)

57. (CANCELLED)

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58. (PREVIOUSLY PRESENTED)      A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:  
regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and  
de-activating said power control algorithm if said criterion is met,  
wherein said de-activation includes performing a different type of algorithm than said power control algorithm,  
wherein said algorithm is one of a closed loop power control algorithm and a open loop power control algorithm and said other algorithm is the other of said closed loop power control algorithm and said open loop power control algorithm.

59. (CANCELLED)

60. (NEW)      A mobile radiocommunication network entity, comprising, for performing a method according to claim 25, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

61. (NEW)      A mobile station, comprising, for performing a method according claim 25, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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62. (NEW) A mobile station, comprising, for performing a method according to claim 25, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

63. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 25, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

64. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 26, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

65. (NEW) A mobile station, comprising, for performing a method according claim 26, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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66. (NEW) A mobile station, comprising, for performing a method according to claim 26, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

67. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 26, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

68. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 27, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

69. (NEW) A mobile station, comprising, for performing a method according claim 27, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.



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70. (NEW) A mobile station, comprising, for performing a method according to claim 27, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

71. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 27, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

72. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 32, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

73. (NEW) A mobile station, comprising, for performing a method according claim 32, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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74. (NEW) A mobile station, comprising, for performing a method according to claim 32, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

75. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 32, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

76. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 35, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

77. (NEW) A mobile station, comprising, for performing a method according claim 35, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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78. (NEW) A mobile station, comprising, for performing a method according to claim 35, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

79. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 35, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

80. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 46, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

81. (NEW) A mobile station, comprising, for performing a method according claim 46, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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82. (NEW) A mobile station, comprising, for performing a method according to claim 46, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

83. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 46, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

84. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 58, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

85. (NEW) A mobile station, comprising, for performing a method according claim 58, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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86. (NEW) A mobile station, comprising, for performing a method according to claim 58, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

87. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 58, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.